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FINAL REPORT

STUDY TO ENCOURAGE AND FACILITATE INDUSTRIAL INVESTMENT  
AND  
INVOLVEMENT IN SPACE

FEBRUARY 29, 1984

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James E. Wilson  
Consultant



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## INTRODUCTION

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THE CONFLICTING DEMANDS FOR TIME AND ATTENTION ON THE DIRECTOR OF THE OFFICE FOR COMMERCIAL USES OF SPACE (DIRECTOR, SPACE STATION TASK FORCE) OCCASIONED A REQUEST TO STRUCTURE A SIMPLY EXECUTED SYSTEM TO ROUTINELY IDENTIFY KEY ACTIONS WHICH NEED TO BE ACCOMPLISHED IN SUPPORT OF THE RESPONSIBILITIES OF THE OFFICE. AS A RESULT THIS STUDY WAS MADE TO EVALUATE AN APPROACH CENTERED ON UTILIZING THE ANNUAL FEDERAL BUDGET CYCLE EVENTS TO TRIGGER ANALYSIS OF REQUIREMENTS FROM THE VIEWPOINT OF THE KEY PARTICIPANTS EXTERNAL TO NASA AND TAILORED TO THEIR NEEDS TO AID IN PROVIDING TIMELY INFORMATION RELATING TO COMMERCIAL USES OF SPACE. A FURTHER REQUIREMENT WAS PROVISION FOR DEVELOPMENT OF A SIMPLE VISIBLE METHOD FOR KEEPING TRACK OF CRUCIAL ITEMS. RECOMMENDATIONS FOR IMPLEMENTATION OF THE APPROACH AND THE "TOOLS" DEVELOPED ARE DISCUSSED IN THE REPORT.

THE AUTHOR WHILE TAKING FULL RESPONSIBILITY FOR THE CONTENT OF THIS STUDY WISHES TO CITE THE ENTHUSIASTIC SUPPORT, COOPERATION AND GUIDANCE RECEIVED DURING THE COURSE OF THIS EFFORT FROM L.J. EVANS, JR., CODE ADB, J.M. SMITH, CODE ADB AND R.G. ERUS, CODE C.



## SECTION 1.0 OBJECTIVE AND APPROACH

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The purpose of this effort was to prepare a simple and efficient means to alert the Director, Space Station Commercialization Task Force (DSCTF) and the equivalent director of a permanent office for the same function, to actions required to assure comprehensive support of the NASA objectives for commercial uses of space during the annual budget cycle.

It was recognized at the outset that to avoid both excessive paper work and consequent loss of time the approach should be structured to filter information in a way to give cryptic indicators to the DSCTF in a timely manner. To facilitate this objective an initial generic budget cycle was derived (see Appendix A) as a guide to key events. In support of this generic budget cycle a second instrument, a participant analysis was developed to evaluate participants in the budget cycle, their backgrounds and requirements, so that an understanding and analysis could be obtained of the participants needs in the budget cycle and the required NASA actions (see Appendix B). Finally a simple index card system was derived to summarize in brief the key actions which were a result of the participant analysis (see Appendix C).

Table 1-1 summarizes the progress of the study effort, which is detailed in following sections of the report.





TABLE 1-1

## ACTIVITY SUMMARY

<u>Date</u>	<u>Activity</u>
12/15/83	Initial Oral Progress Report (OPR) to review planning of effort
12/20/83	Criteria for generic budget cycle structure established
12/28/83	Second OPR
1/3/84	Format for initial participant analysis developed
1/10/84	First review of participant analysis
1/12/84	Third OPR
1/16/84	Interim Progress Report submitted
1/18/84	First Generic Budget Cycle review
1/27/84	Participant analysis initiated
1/30/84	Fourth OPR
1/31/84	Participant analysis continued
2/1/84	Action index content reviewed
2/6,8,9/84	Participant analysis continued
2/15/84	Fifth OPR
2/16&23/84	Review of instruments developed
2/29/84	Final Report, Summary of Work



## SECTION 2.0 THE GENERIC BUDGET CYCLE

As outlined in Table 1-1 substantial attention was given to the content of the annual budget cycle during the early phases of the study. The objective was to provide a graphic portrayal of the principal action points in the budget cycle with a clear indication of their interrelationship within and among organizations. The result of several iterations of the portrayal derived is shown in Appendix A. The intent is to show key action nodes, unencumbered by excessive detail, to signal the DSCTF that actions are likely required in the times periods shown. Those actions will vary from year to year as the subject matter, participants, and the cycle itself change. As a consequence it is recommended that this budget cycle chart be updated in July of each year to account for major changes in subsequent (approximately 18-month) cycles.

NASA is centered in the chart to relate both the Program Operating Plan sequence and the Budget submission to the required OMB, House of Representatives and Senate requirements. A limited number of "Special Events" are noted at the bottom of the chart. Inspection of a cross section of the chart for any month gives a key to major areas of action and lead to examination of the compilation of Participant Analyses, APPENDIX B, discussed in the next section. Further improvement can be expected in this general indicator chart as it is examined and used.



### SECTION 3.0 PARTICIPANT ANALYSIS

As each major event in the generic budget cycle is examined it is possible to compile a listing of key participants in that event both within and external to NASA. The participant analysis, Appendix B, was structured on the basis that actions taken by NASA related to an event should convey required information in a form tailored to the participant and that such actions by NASA should be identified by event, time, NASA performer(s), special features and requisite follow-up to the extent possible. To maintain simplicity the form was prepared in blank, to be completed in pencil and reviewed monthly. As a form for a particular participant became filled, it would be discarded after moving still active item to a new sheet for the participant. Thus the form was developed to be a working paper- not a formal document, prepared in a simple and rapid fashion. Again, inspection of a cross section for a single month can quickly indicate event time, NASA performer(s) and follow-up required, if any. It also gives a preview of subsequent major events for planning purposes. It is recommended that the DSSTF designate an individual to maintain within the office one set of these analyses in close coordination with Codes B, Office of the Comptroller and Code C, Office of Legislative Affairs and other NASA offices as may be appropriate.

These analyses are easily examined by individual participant; however, a synthesis is necessary if the DSCTF is to be able to quickly focus the required action items for the current month. The next section discusses the approach proposed to do this through an "Action Index", (see Appendix D). It should be noted that the DSSTF can use the Participant Analysis in two ways;

- 1 - to develop an understanding of a participant's needs by direct participation in developing such an analysis, and
- 2 - as a cross check on notations for action in the "Action Index."

As with the generic budget cycle, the adaptation of the participant analysis should continue as experience develops the strengths and weaknesses of the instruments.

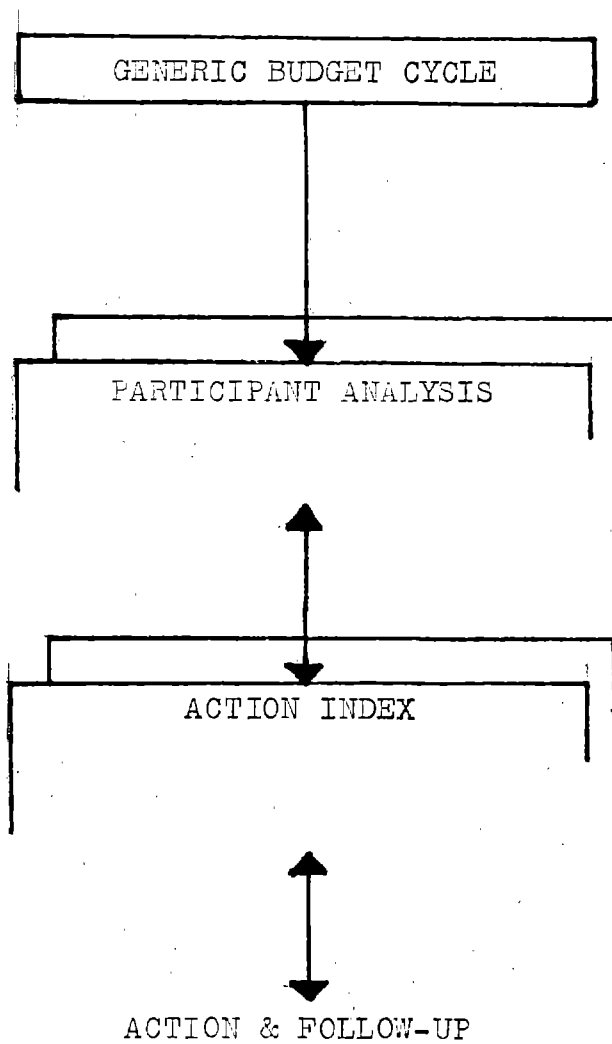


TABLE 4-1

FLOW SEQUENCE

FOR

ACTION INDEX







SECTION 5.0 RECOMMENDATIONS

The ultimate success of any management tool rests in the people who may use it. The use of the approach proposed in this study is no substitute for the day-to-day attention which management brings to planning, organizing and directing the flow of information necessary to support the activity for commercial uses of space. The following recommendations are made with the view that application of the approach can be further refined with experience in application:

1. that the Generic Budget Cycle events be reviewed on an annual basis and updated as required.
2. that a specific individual within the office for commercial uses of space be designated to coordinate, as appropriate, and maintain the participant analysis and action indices.
3. that the individual preparing the participant analyses and action indices be made the action authority for second tier action items, and
4. that a follow-up review to this effort be made to assess the effectiveness of the approach and modifications necessary to improve the system.



# CONGRESS AND EXECUTIVE BUDGET PROCESS

	FISCAL YEAR									FISCAL YEAR								
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
<b>HOUSE</b>																		
● SCIENCE & TECHNOLOGY COMMITTEE																		
● SUBC ON SPACE SCIENCE & APPLICATIONS																		
● SUBC ON AVIATION, TRANSPORTATION & MATERIALS																		
● HUD—INDEPENDENT AGENCIES APPROPRIATIONS SUBC																		
● BUDGET COMMITTEE																		
<b>OMB</b>																		
<b>NASA</b>																		
<b>SENATE</b>																		
● COMMERCE, SCIENCE & TRANSPORTATION																		
● SUBC ON SCIENCE, TECHNOLOGY & SPACE																		
● HUD—INDEPENDENT AGENCIES APPROPRIATIONS SUBC																		
● BUDGET COMMITTEE																		
<b>SPECIAL EVENTS</b>																		

APPENDIX A  
GENERIC BUDGET CYCLE  
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Participant

Organization

Revision

Dated

Title

**PARTICIPANT BACKGROUND**

ACADEMIC

SPECIAL

PROFESSIONAL

JAN

FEB

MAR

APR

MAY

JUN

JUL

AUG

SEP

OCT

NOV

DEC

EVENT

EVENT DATE

CONTACT

SPECIAL FEATURES

NASA RESPON.  
PERFORMER

FOLLOW-UP REQ

APPENDIX B  
PARTICIPANT ANALYSIS

# APPENDIX C

## ACTION INDEX

Month: \_\_\_\_\_

<u>Action Item</u>	<u>Performer</u>	<u>Date</u>	<u>Follow-up</u>		<u>Type</u>
			<u>Date</u>	<u>Performer</u>	
Prep. Testimony for House S&T	C	2/20	after 2/20	L	3

Follow-up type:

1. Oral follow-up
2. Written follow-up
3. Specific briefing  
and/or data

